

MINING ASSOCIATION RULES OVER PRIVACY PRESERVING DATA

ABSTRACT

The following discloses a method of mining association rules from the databases while maintaining privacy of individual transactions within the databases through randomization. The invention randomly drops true items from transactions within a database and randomly inserts false items into the transactions. The invention mines the database for association rules after the dropping and inserting processes, and estimates the support of association rules in the original dataset based on their support in the randomized dataset. The dropping of the true items and the inserting of the false items is carried out to an extent such that the chance of finding a false itemset is sufficiently high relative to the chance of finding a true itemset in the database.